APPENDIX 3.6.5.

ANTHRAX BACTERIUM AND SPORE DESTRUCTION PROCEDURES

Article 3.6.5.1.

Meat-and-bone meal

For the destruction of vegetative bacteria and spores present in meat-and-bone meal, the following procedure should be used:

1. The raw material should be reduced to a maximum particle size of 50 mm.

2. The raw material should be heated either to a temperature of 100-105°C for 20 minutes or to a temperature of 100-115°C for 15 minutes.

Article 3.6.5.2.

Bone-meal and hoof or horn meal

For the destruction of spores present in bone-meal and hoof or horn meal, the following procedure should be used: the broken bones, hoof or horn or bone-meal should be subjected to heat sterilisation for at least 3 hours at 150°C.

Article 3.6.5.3.

Wool

For the destruction of spores present in wool, one of the following procedures should be used:

1. Disinfection

   The products should be subjected to one of the following procedures:

   a) fumigation with formaldehyde or glutaraldehyde gas at a rate of 250 ml of formalin per m^3 in a hermetically sealed chamber for at least 6 hours at a temperature of 60°C;

   b) immersion over five stages, each of 10 minutes duration at a temperature of 40°C in (i) 0.25-0.3% sodium carbonate, (ii) 0.25% alkaline soap solution, (iii) 2% formaldehyde solution, (iv) 2% formaldehyde solution, (v) rinsing in water and drying in hot air.

2. Irradiation

   The products should be subjected to an irradiation process with gamma rays in excess of 45 kGy.

Article 3.6.5.4.

Hair and bristles

For the destruction of spores present in hair and bristles, one of the following procedures should be used:

1. Disinfection

   The products should be subjected to one of the following procedures:

   a) immersion in 0.25% formaldehyde solution for 6 hours at a temperature of 60°C;

   b) fumigation with formaldehyde or glutaraldehyde gas at a rate of 250 ml of formalin per m^3 in a hermetically sealed chamber for at least 6 hours at a temperature of 60°C;

   c) immersion over five stages, each of 10 minutes duration at a temperature of 40°C in (i) 0.25-0.3% sodium carbonate, (ii) 0.25% alkaline soap solution, (iii) 2% formaldehyde solution, (iv) 2% formaldehyde solution, (v) rinsing in water and drying in hot air.

2. Irradiation

   The products should be subjected to an irradiation process with gamma rays in excess of 45 kGy.

Article 3.6.5.5.

Hides and skins

For the destruction of spores present on and in hides and skins, one of the following procedures should be used:

1. Disinfection

   The products should be subjected to:

   a) either an industrial scouring process which consists of the immersion of the hides or skins in a solution containing a mixture of 2.5% hydrochloric acid and 15% salt for 24 hours at a temperature of 20°C;

   b) or a dehairing process (dry weight = 700 kg) using sodium sulphide liming with a mixture of sodium sulphide (100 kg crystalline form or 50 kg fused form) and calcium hydroxide (100 kg) in 10,000 L at a temperature of 32°C for 12 hours and at a temperature of 20°C for 60 hours with rotation at 2 ½ times per minute for 8 hours and then 2-3 times daily to expose the spores at a pH sufficiently high to inactivate the spores.

2. Irradiation

The products should be subjected to an irradiation process with gamma rays so as to sterilise the product, which may require in excess of 45 kGy.